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January 23, 2004

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Commissioner for Patents  
Washington, D.C. 20231

**Art Unit 2664**

Re: U.S. Utility Patent Application  
Appl. No. 09/632,857; Filed: August 4, 2000  
For: **Wireless Local Area Network (WLAN) Technology and Applications**  
**Including Techniques of Universal Frequency Translation**  
Inventors: Sorrells *et al.*  
Our Ref: 1744.0630002

Sir:

Transmitted herewith for appropriate action are the following documents:

1. ParkerVision IDS References Disc 3;
2. Second Supplemental Information Disclosure Statement;
3. Form PTO-1449 citing documents (4 sheets);
4. Copies of cited documents on Form PTO-1449 (AE53-AI53, AK23, AR58, AA54-AI54, AN59, AA55-AI55, AA56-AH56); and
5. Return postcard.

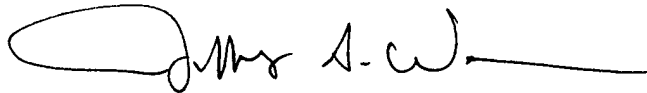
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents  
January 23, 2004  
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Jeffrey S. Weaver", with a long horizontal line extending to the right.

Jeffrey S. Weaver  
Attorney for Applicants  
Registration No. 45,608

MQL/JSW/asl  
Enclosures

SKGF\_DC1:222046.1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Sorrells *et al.*

Appl. No. 09/632,857

Filed: August 4, 2000

For: **Wireless Local Area Network  
(WLAN) Technology and  
Applications Including  
Techniques of Universal  
Frequency Translation**

Art Unit: 2664

Examiner: Chen, W.

Atty. Docket: 1744.0630002

**Second Supplemental Information Disclosure Statement**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Second Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Supplemental Information Disclosure Statement filed on July 29, 2003 in connection with the above-captioned application.

In addition to providing hard copies of the documents as required by applicable rules, Applicants herewith provide a Compact Disc labeled "Disc 3" having stored thereon searchable electronic copies (in PDF format) of many of the documents listed on the PTO-1449. More specifically, the CD contains electronic copies of documents AE53-AI53, AA54-AI54, AA55, AK23 and AR58. In addition, the CD contains electronic copies of documents AC46-AI46, AA47-AI47, AA48-AI48, AA49, AE49-AI49, AA50-

AI50, AA51-AI51, AA52, AB52, AF52-AI52, AA53-AD53, AM13, AJ14-AM14, AJ15-AM15, AJ16-AM16, AJ17-AM17, AJ18-AM18, AJ19-AM19, AJ20-AM20, AJ21-AM21, AJ22-AM22, AJ23, AQ51, AR51, AN52-AR52, AN53-AR53, AN54-AR54, AN55-AR55, AN56-AR56, AN57-AR57, AN58-AQ58, all of which were cited in previous Information Disclosure Statements. Documents AB55-AI55, AA56-AH56 and AN59 have not yet been scanned. The file names on the CD correspond to the identifiers on the PTO-1449s. It is noted that the CD is being provided in addition to hard copies of the documents (as required by applicable rules) for the convenience of the Examiner.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Documents AE53-AH53 were cited in an International Search Report in related PCT Application No. PCT/US02/35861, filed November 8, 2002, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AI53 and AA54-AF54 were cited in an Office Action in related U.S. Patent Application No. 09/476,093, filed January 3, 2000, entitled "Family Radio System with Multi-Mode and Multi-Band Functionality," directed to related subject matter.

Documents AG54-AI54 and AA55 were cited in an International Search Report in related PCT Application No. PCT/US03/16403, filed May 27, 2003, entitled "Method and Apparatus for DC Offset Removal in a Radio Frequency Communication Channel," directed to related subject matter.

Documents AB55 and AC55 were cited in an Office Action in related U.S. Patent Application No. 09/550,642, filed April 14, 2000, entitled "Method and System for Down-converting an Electromagnetic Signal, and Transforms for Same," directed to related subject matter.

Documents AD55 and AC56 are co-owned patents which are directed to related subject matter.

Documents AE55-AI55 were cited in an Office Action in related U.S. Patent Application No. 09/548,923, filed April 13, 2000, entitled "Method and System for Frequency Conversion with Modulation Embodiments," directed to related subject matter. Also cited in the Office Action were U.S. Patent Nos. 6,091,940 and 6,353,735, which have already been cited in the present application in the Information Disclosure Statement, filed August 5, 2002.

Documents AA56 and AB56 were cited in an Office Action in related U.S. Patent Application No. 09/543,867, filed April 5, 2000, entitled "Automated Meter Reader Applications of Universal Frequency Translation," directed to related subject matter.

Documents AD56 and AE56 were cited in an Office Action in related U.S. Patent Application No. 10/317,181, filed December 12, 2002, entitled "Differential Frequency Down-Conversion Using Techniques of Universal Frequency Translation Technology," directed to related subject matter.

Documents AF56 and AG56 were cited in an Office Action in related U.S. Patent Application No. 10/317,165, filed December 12, 2002, entitled "Method and Apparatus for Reducing DC Offsets in Communication Systems Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AH56 and AN59 were cited in an Office Action in related U.S. Patent Appl. No. 09/567,977, filed May 10, 2000, entitled, "Optical Down-converter Using Universal Frequency Translation Technology," directed to related subject matter.

Document AK23 was cited in an Office Action in related Japanese Patent Application No. 2000-577,764, filed June 21, 2000, entitled "Applications of Frequency Translation," directed to related subject matter.

The other documents in the PTO-1449 do not fall within the above categories.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

- 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
  - c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).
- 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
  - a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement

was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- 6. A concise explanation of the relevance of non-English language document AK23 appears below:
- Document AK23 (JP 9-36664) appears to describe a frequency conversion circuit. A copy of the English-language abstract of document AK23 is enclosed as document AR58.
- ☐ 7. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

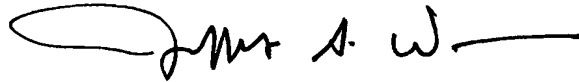
It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.



The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Mr. J. W.", with a long horizontal stroke extending to the right.

Jeffrey S. Weaver  
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Registration No. 45,608

Date: 1-23-04

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FORM PTO 149

SECOND SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.  
1744.0630002APPLICATION NO.  
09/632,857APPLICANTS  
Sorrells et al.FILING DATE  
August 4, 2000GROUP  
2664

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE53	5,751,154	05/1998	Tsugai			
	AF53	5,793,817	08/1998	Wilson			
	AG53	6,225,848 B1	05/2001	Tilley et al.			
	AH53	6,313,685 B1	11/2001	Rabii			
	AI53	3,614,627	10/1971	Runyan et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ						
	AK23	JP 9-36664	02/1997	JP			No
	AL						
	AM						

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AN		
	AO		
	AP		
	AQ		
	AR	58	English-language Abstract of Japanese Patent Publication No. 09-036664, from <a href="http://www1.ipdl.jpo.go.jp">http://www1.ipdl.jpo.go.jp</a> , 2 Pages (February 7, 1997 - Date of publication of application).

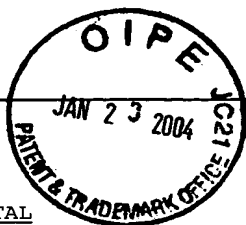
EXAMINER

DATE CONSIDERED

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

**SECOND SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT**


 ATTY. DOCKET NO.  
1744.0630002

 APPLICATION NO.  
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 APPLICANTS  
Sorrells et al.

 FILING DATE  
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2664

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA54	3,940,697	02/1976	Morgan			
	AB54	4,016,366	04/1977	Kurata			
	AC54	4,045,740	08/1977	Baker			
	AD54	4,115,737	09/1978	Hongu <i>et al.</i>			
	AE54	5,710,992	01/1998	Sawada <i>et al.</i>			
	AF54	5,790,587	08/1998	Smith <i>et al.</i>			
	AG54	4,740,675	04/1988	Brosnan <i>et al.</i>			
	AH54	5,483,600	01/1996	Werrbach			
	AI54	6,011,435	01/2000	Takeyabu <i>et al.</i>			

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AJ						
	AK						
	AL						
	AM						

**OTHER (Including Author, Title, Date, Pertinent Pages, etc.)**

	AN	59	Simoni, A. <i>et al.</i> , "A Single-Chip Optical Sensor with Analog Memory for Motion Detection," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. 30, No. 7, pp. 800-806 (July 1995).
	AO		
	AP		
	AQ		
	AR		

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FORM PTO-1449

SECOND SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT

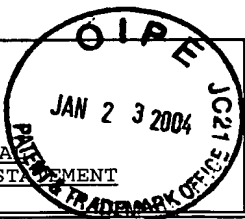
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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA55	6,321,073 B1	11/2001	Luz et al.			
	AB55	6,026,286	02/2000	Long			
	AC55	6,178,319 B1	01/2001	Kashima			
	AD55	6,634,555 B1	10/2003	Sorrells et al.			
	AE55	3,736,513	05/1973	Wilson			
	AF55	4,488,119	12/1984	Marshall			
	AG55	4,633,510	12/1986	Suzuki et al.			
	AH55	5,369,789	11/1994	Kosugi et al.			
	AI55	5,416,449	05/1995	Joshi			

## FOREIGN PATENT DOCUMENTS

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	AK						
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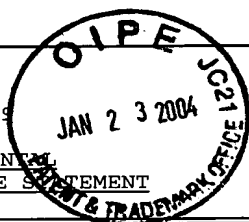
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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA56	5,438,329	08/1995	Gastouniotis et al.			
	AB56	6,611,569 B1	08/2003	Schier et al.			
	AC56	6,647,250 B1	11/2003	Bultman et al.			
	AD56	5,682,099	10/1997	Thompson et al.			
	AE56	6,094,084	07/2000	Abou-Allam et al.			
	AF56	6,067,329	05/2000	Kato et al.			
	AG56	6,516,185 B1	02/2003	MacNally			
	AH56	6,608,647 B1	08/2003	King			
	AI						

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
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